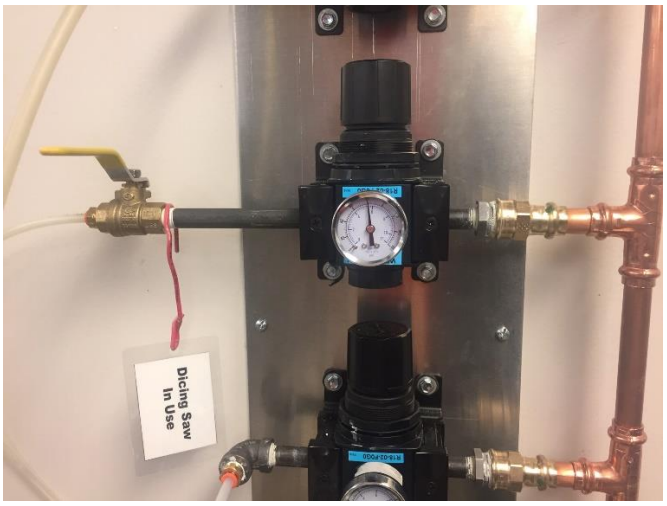
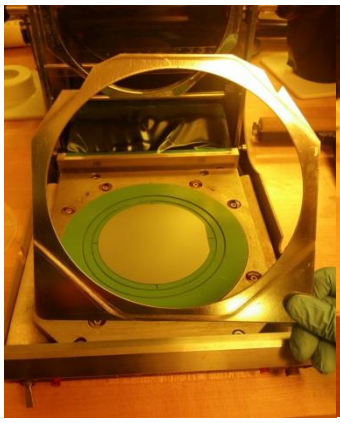
MICROAUTOMATION MODEL 1006 Dicing Saw

If the water trap is full, open the valve to empty it.

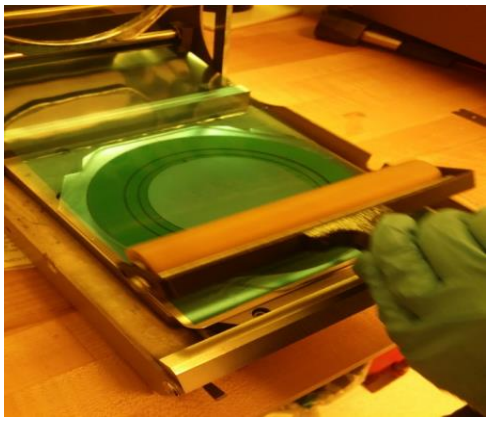
- Sample and Blade Preparation
    1. Open valves at the back – **water, air, and vacuum**. If house vacuum is not functional, please let NCF staff know and they will connect an external pump for you.



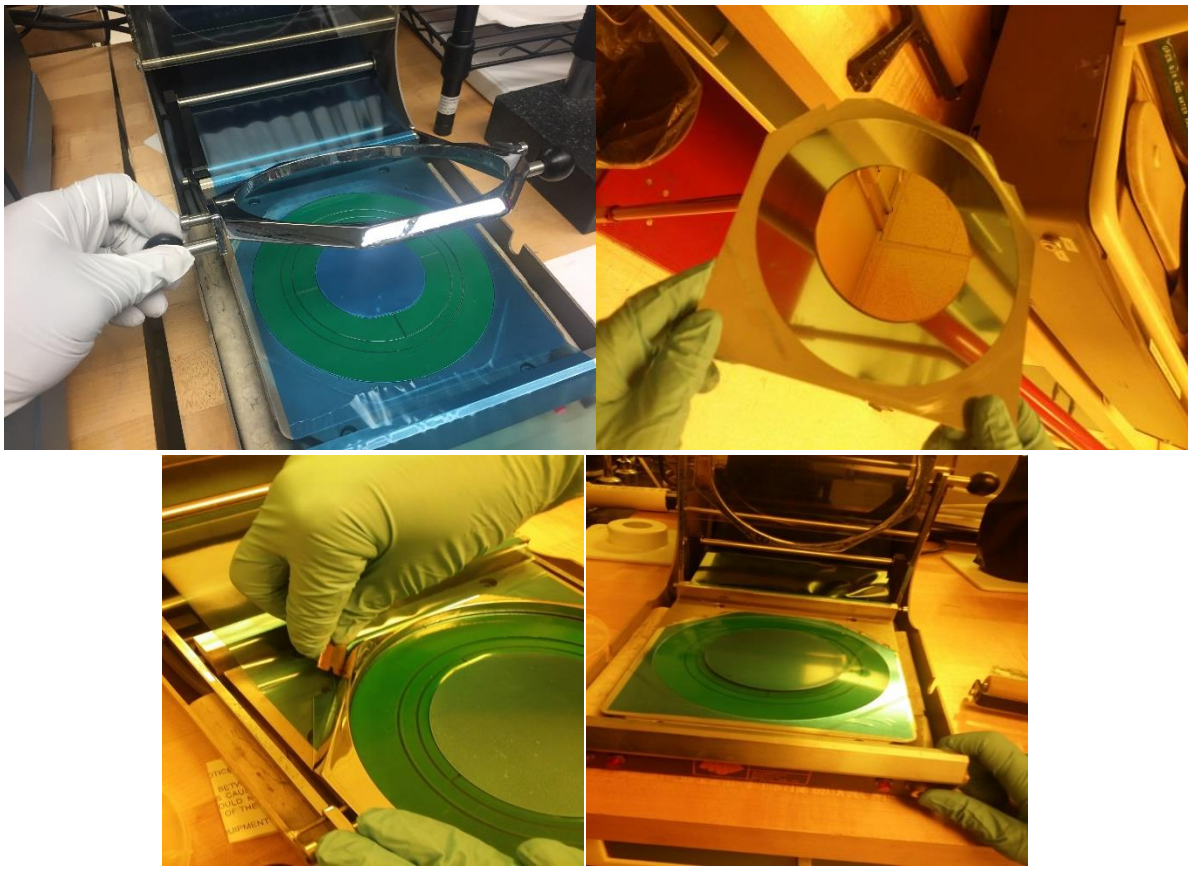
    2. Turn the sample preparation plate (power switch on the back). Align sample to the center of the plate and put holder plate down. Turn on the vacuum.



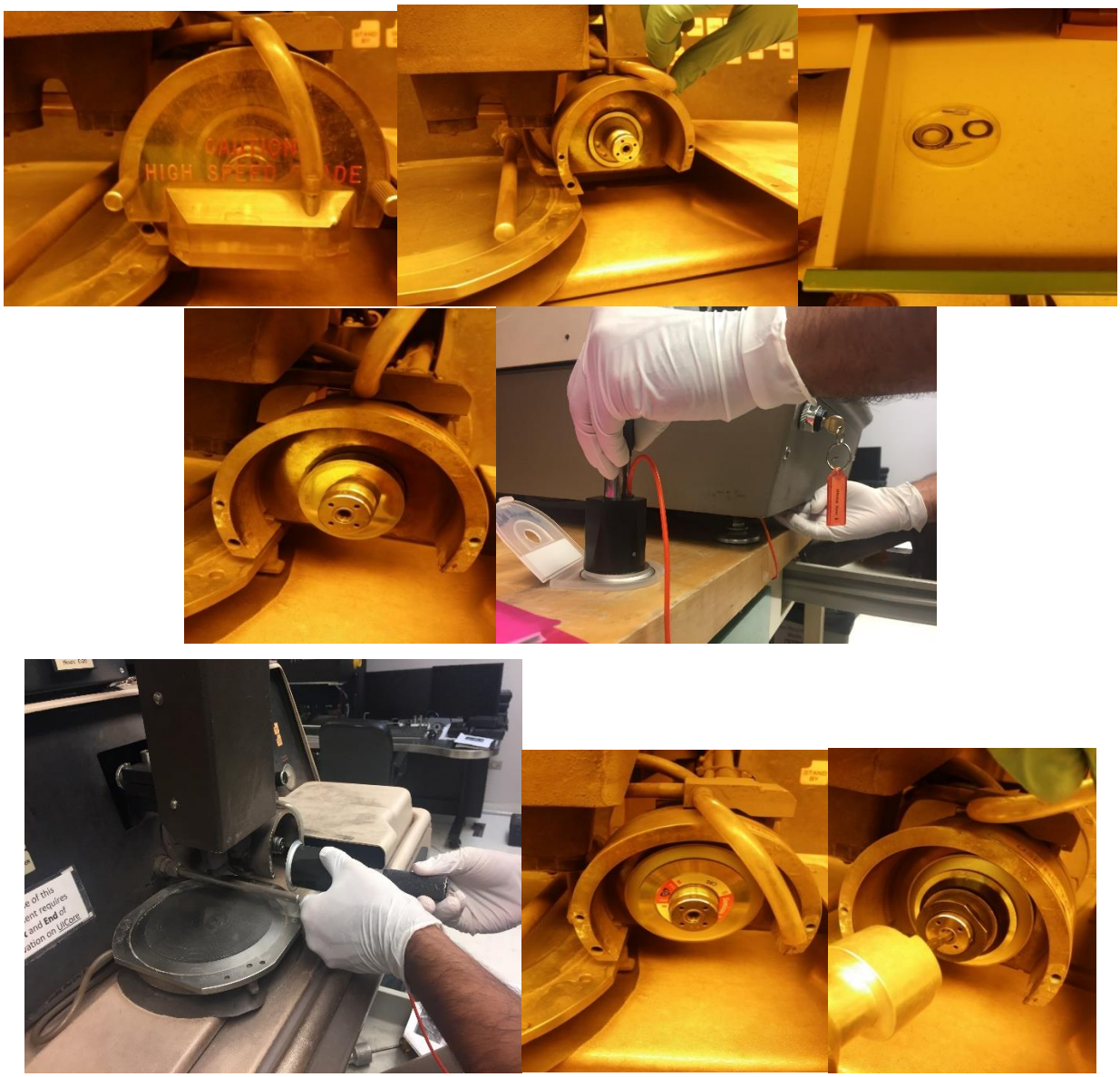
3. Pull the blue tape over the sample and roll over using the roller



4. Pull guard ring down and cut the tape with small blade. Push button to release the sample



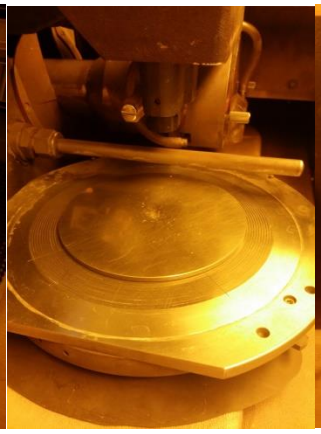
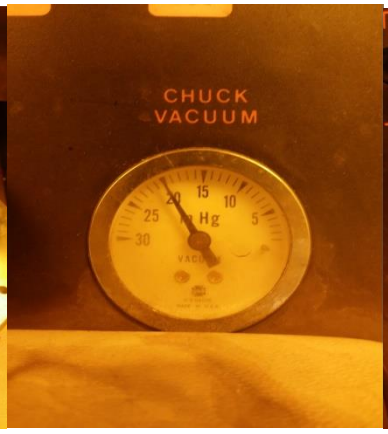
5. Check the logbook and enter the necessary information.
6. Depending on the sample to be diced, assemble the blade to be used. (If the back of the dicing blade is **<u>not flat</u>**, insert a spacer to avoid friction when dicing.)



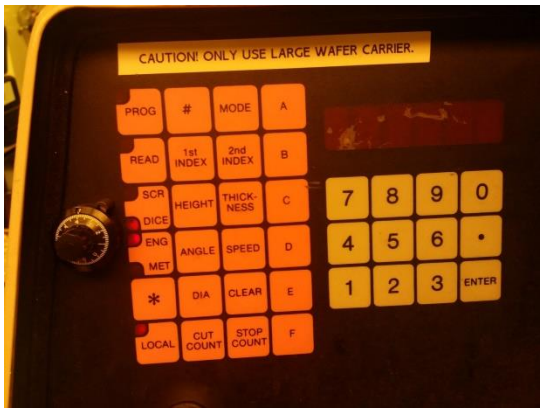
- Programming Saw and Dicing
    1. Insert key and pull the stop button to release it

    2. Press **reset**, then press **spindle**, wait for light (blade gets up to speed). Use buttons on top panel if bottom panel buttons don't work.

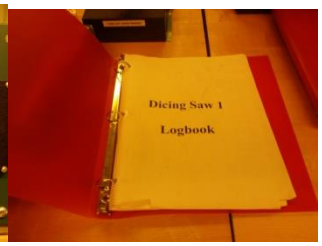
3. Put the dummy chuck on the platform and press lock. Press **chuck zero** and wait for the light.

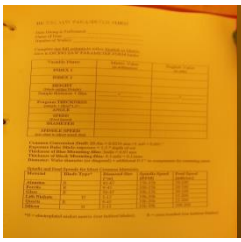
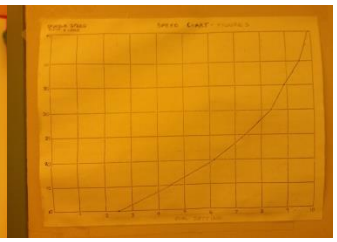




4. Press **unlock** to release chuck.
5. Press **program** then press **metric**. **Make sure the light switches from ENG to MET!**

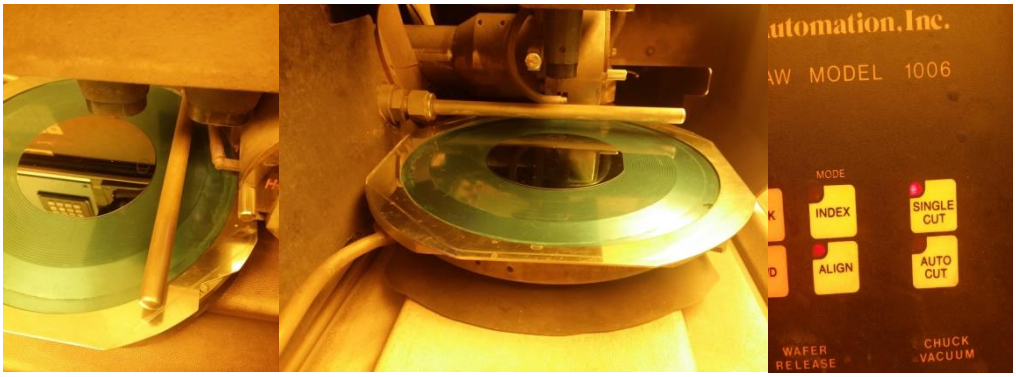


6. Program in the numbers from the logbook sheet. For spindle speed look at the chart the side on the dicing saw (4th picture).

7. Press the **program** button again to exit programming. Press **read** to check all the parameters are correct. Press **read** again to exit reading mode.
8. Place a dummy sample on the dicing saw platter. Find empty space to dice on a dummy sample.

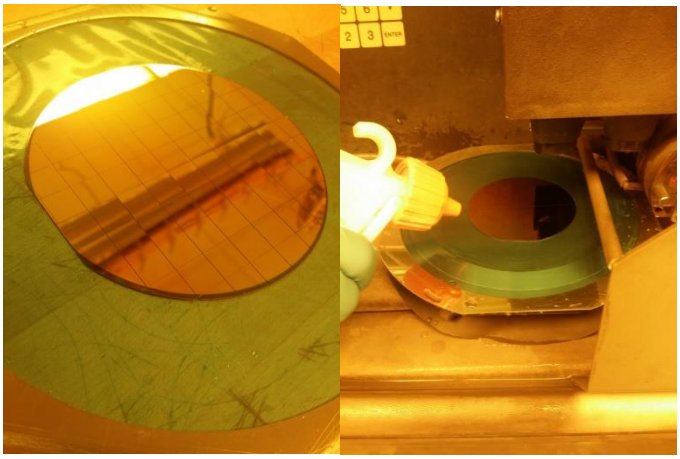


- To move fast, press **index** - the camera and blade will move by the index of sample that was programmed into the saw.
- To move slowly, press **align** – this will move by small amount

9. Press **single cut** – this will cut the sample once at the position that the blade is in. After the cut, the screen will look as such.

10. If the cut is good, press **align** and used the **spacing** buttons to separate the dicing line. Use the **position** buttons to move the dice line up and down.

11. Press **clear**. Then press **unlock** to remove dummy sample.
12. Put in your sample and press **lock**.
13. Press **align** and check for angular offset in the dicing line. If offset, use the **CW** and **CCW** buttons to try and straighten the dicing line as much as possible. This is to align the line to your wafer.
14. When you are ready, dice your sample and blow off excess water with air gun.
    - **Single Cut** – This will cut only once. You must move to the next cutting location yourself.
    - **Auto Cut -** make sure you're are in **index mode**
        - The system will move once by the index you programmed and then start cutting.
        - The saw will automatically move by the index to the next location and cut again.
        - The saw will stop cutting once the it has moved by the **diameter** of the wafer you programmed.



- Turn off
    1. Press clear to start the turn off process.
    2. Press spindle to stop the dicing blade. Remove the blade and put it back where it should be.
    3. Press **unlock** and remove your sample.
    4. Remove the key.
    5. Close air, water, and vacuum valves at the back.